

Mineral Industry Surveys

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ALUMINUM IN SEPTEMBER 2016

Domestic primary aluminum production in September 2016 was 61,000 metric tons (t), 53% less than that in September 2015. The average daily production in September, however, was 2,020 t, slightly more than the daily production during the preceding month. Primary aluminum production in the first 9 months of 2016 was 47% lower than that of the same period in 2015.

Total aluminum recovered from scrap in September 2016 was 302,000 metric tons (t), 3% less than the revised amount recovered in August but 6% more than that in September 2015 (fig. 1, table 1). Of this, 169,000 t of aluminum was recovered from new scrap, slightly less than the amount in the preceding month but 5% more than the amount recovered in September 2015, and 133,000 t was recovered from old scrap, 4% less than the revised amount recovered in the preceding month but 7% more from the amount in September 2015. Secondary aluminum production in the first 9 months of the year was 6% higher than that in the same period in 2015.

period in 2015; imports of crude metal and alloys increased by 22% and imports of scrap increased by 14%, but imports of semifabricated products decreased by 4%. Canada continued to be the leading source of imported aluminum materials, supplying 48% of all aluminum imports during the first 9 months of 2016, followed by Russia (13%), the United Arab Emirates (9%), and China (6%). Canada accounted for 54% of crude metal, 22% of semifabricated products, and 60% of scrap imports. China accounted for 31% of semifabricated product imports. Mexico was the source of 21% of scrap imports.

Total exports of aluminum (table 9) decreased by 6% during the first 9 months of 2016 compared with those of the same period in the previous year. Exports of crude metal and alloys were decreased by 15%, exports of semifabricated aluminum products increased by 9%, and exports of aluminum scrap decreased by 14%. The leading destinations for total aluminum products during the first 9 months of 2016, in descending order of quantity, were Mexico (26%), China (25%), and Canada (23%).

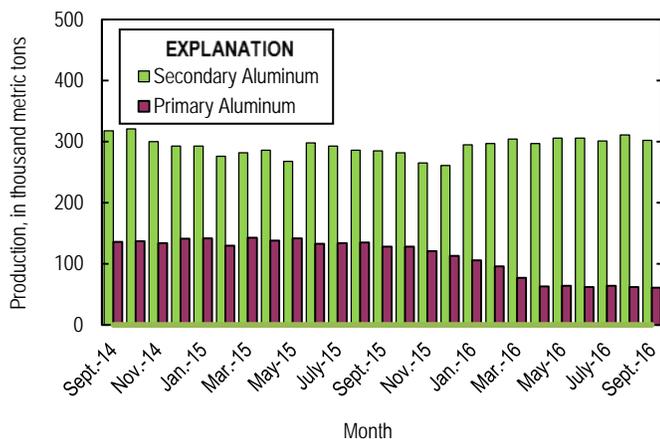


Figure 1. Monthly domestic primary and secondary aluminum production from September 2014 through September 2016. Source: U.S. Geological Survey.

U.S. Trade

Total imports for consumption of aluminum in the first 9 months of 2016 (table 8) were 15% more than those in the same

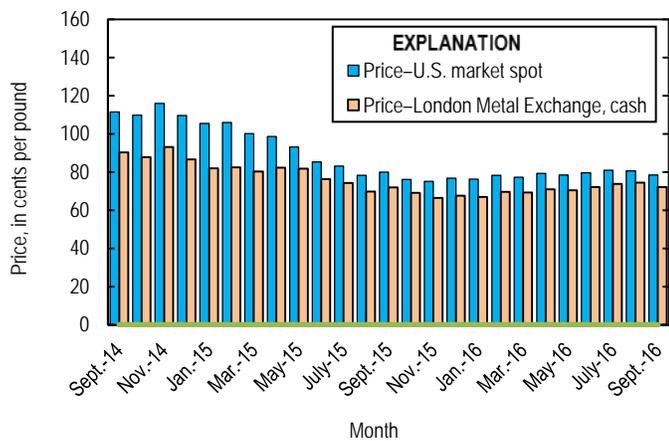
Update

On October 28, ARG International AG completed the purchase of Noranda Aluminum Holding Corp.’s idle primary aluminum smelter in New Madrid, MO (Matyi, 2016). An electrical failure shut down two-thirds of the 263,000-metric-ton-per-year smelter’s capacity in January and the remaining capacity was shut down in March. Noranda filed for bankruptcy protection in February citing low prices for aluminum, alumina, and bauxite, in addition to high power prices. (See Aluminum in January 2016.)

Prices and Stocks

The September average U.S. market price of primary aluminum ingot and average cash price on the London Metal Exchange Ltd. (LME) decreased by 3% from those in August to \$0.785 per pound and \$0.721 per pound, respectively (fig. 2).

Inventories of primary aluminum in LME-approved warehouses in the United States decreased to 292,000 t at the end of September.



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Figure 2. Average monthly prices for primary aluminum from September 2014 through September 2016. Source: Platts Metals Week.

Reference Cited

Matyi, Bob, 2016, ARG closes on purchase of Noranda’s New Madrid Al smelter: Platts Metals Daily, v. 5, no. 215, November 1, p. 2–3.

TABLE 1
COMPONENTS OF ALUMINUM SUPPLY¹

(Thousand metric tons)

Period	Primary production	Secondary recovery ²			Imports for consumption			Total new supply ³	Stocks, end of period ⁴
		New	Old	Total	Metals and alloys, crude	Plates, sheets, bars, etc.	Total		
2015 ^p	1,587	1,910	1,470	3,380	3,380	1,180	4,560	9,520 ^r	1,320
2015:									
September	128	161	124	285	283	87	370	784	1,310
October	128	157	126	282	270	88	358	769	1,320
November	121	153	112	265	267	85	353	739	1,350
December	113	151	110	261	259	87	346	721	1,350
January–September	1,224	1,450	1,120	2,570	2,590	918	3,510	7,300	1,370
2016:									
January	106	170 ^r	125 ^r	295 ^r	362	91	453	854 ^r	1,340
February	96	168 ^r	129 ^r	297 ^r	270	89	359	752 ^r	1,370
March	77	171 ^r	133 ^r	304 ^r	385	96	481	862 ^r	1,330
April	63	165 ^r	131 ^r	297 ^r	350	97	447	806 ^r	1,300
May	64	172	135 ^r	306 ^r	336	107	443	814 ^r	1,320
June	62	171	135 ^r	306 ^r	401	104	505	872 ^r	1,320
July	64	168 ^r	133 ^r	301 ^r	346	108	454	819 ^r	1,350
August	62	173	138 ^r	311 ^r	345	100	445	818 ^r	1,340
September	61	169	133	302	349	92	441	804	NA
January–September	654	1,530	1,190	2,720	3,140	884	4,030	7,400	NA

^pPreliminary. ^rRevised. NA Not available.

¹Data are rounded to no more than three significant digits, except "Primary production"; may not add to totals shown.

²Metallic recovery from purchased, tolled, or imported scrap, expanded for full coverage of industry.

³Primary production, secondary recovery, and imports for consumption.

⁴Inventories reflect total for both U.S. and Canadian producers; data from the Aluminum Association Inc.

TABLE 2
ESTIMATED FULL COVERAGE CONSUMPTION OF AND METALLIC RECOVERY FROM
PURCHASED NEW AND OLD ALUMINUM SCRAP¹

(Thousand metric tons)

Period	Secondary smelters		Independent mill fabricators		Foundries		Other consumers		Total	
	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery
	2015 ^p	1,980	1,510	1,930	1,760	117	103	3	3	4,030
2015:										
September	167	127	163	149	10	9	(2)	(2)	341	285
October	166	126	162	148	10	9	(2)	(2)	338	282
November	165	125	144	132	10	9	(2)	(2)	319	265
December	163	124	140	128	10	9	(2)	(2)	313	261
January–September	1,490	1,130	1,480	1,350	88	78	2	2	3,060	2,570
2016:										
January	181	139	162 ^r	148 ^r	8	8	(2)	(2)	352 ^r	295 ^r
February	180	138	165 ^r	150 ^r	8	8	(2)	(2)	354 ^r	297 ^r
March	185	140	170 ^r	155 ^r	8	8	(2)	(2)	364 ^r	304 ^r
April	183	140	163 ^r	149 ^r	8	8	(2)	(2)	355 ^r	297 ^r
May	185	142	172 ^r	157 ^r	8	8	(2)	(2)	366 ^r	306 ^r
June	185	141	172 ^r	157 ^r	8	8	(2)	(2)	367 ^r	306 ^r
July	184	140	168 ^r	153 ^r	8	8	(2)	(2)	361 ^r	301 ^r
August	187	142	177 ^r	161 ^r	8	8	(2)	(2)	373 ^r	311 ^r
September	181	139	170	155	8	8	(2)	(2)	360	302
January–September	1,650	1,260	1,520	1,390	76	70	3	3	3,250	2,720

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

TABLE 3
CONSUMPTION OF AND RECOVERY FROM PURCHASED
NEW AND OLD ALUMINUM SCRAP IN SEPTEMBER 2016¹

(Metric tons)

	Consumption		Calculated metallic recovery	
	Tabulated reports	Estimated full coverage	Tabulated reports	Estimated full coverage
	Secondary smelters	150,000	181,000	115,000
Independent mill fabricators	155,000	170,000	142,000	155,000
Foundries	7,040	8,450	6,440	7,730
Other consumers	301	361	301	361
Total	313,000	360,000	264,000	302,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 4
PURCHASED AND TOLL-TREATED ALUMINUM-BASE SCRAP AND SWEATED
PIG IN SEPTEMBER 2016¹

(Metric tons)

	September			January–September ²		
	Stocks, opening ²	Net receipts ³	Melted or consumed	Stocks, closing	Net receipts ³	Melted or consumed
New scrap:						
Extrusion	13,100	59,800	59,500	13,400	506,000	507,000
Can stock clippings	6,990	23,100	23,000	7,100	219,000	219,000
Other wrought sheet/clippings	8,850	44,400	46,900	6,300	413,000	421,000
Casting	2,380	5,490	5,590	2,290	57,100	57,400
Borings and turnings	2,800	8,370	8,430	2,740	81,400	81,600
Dross and skimmings	7,130	37,400	37,400	7,130	352,000	352,000
Total new scrap	41,300	178,000	181,000	39,000	1,630,000	1,640,000
Old scrap:						
Used castings	6,830	22,300	22,300	6,800	202,000	202,000
Used extrusion	6,360	17,000	17,000	6,340	133,000	136,000
Used cans (shredded, loose, baled)	5,160	59,700	59,600	5,240	538,000	538,000
Other wrought products	19,100	28,900	26,900	21,200	248,000	251,000
Fragmentized shredder (auto shredder)	2,350	6,630	6,580	2,400	58,100	58,600
Total old scrap	39,800	135,000	132,000	42,000	1,180,000	1,190,000
Sweated pig	183	151	151	183	1,360	1,360
Total all classes	81,300	313,000	313,000	81,200	2,810,000	2,830,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

³Includes data on imported aluminum-base scrap.

TABLE 5
ALUMINUM ALLOYS PRODUCED AT SECONDARY SMELTERS IN THE UNITED
STATES IN SEPTEMBER 2016^{1,2}

(Metric tons)

	September				January–September ³	
	Stocks, opening ³	Production	Net shipments	Stocks, closing	Production	Net shipments
Die-cast alloys:						
13% Si, 360, etc. (0.6% Cu, max.)	3,080	2,880	2,960	3,010	25,900	27,000
380 and variations	7,890	12,900	12,900	7,890	116,000	116,000
Sand and permanent mold:						
95/5 Al-Si, 356, etc. (0.6% Cu, max.)	1,690	4,160	4,160	1,690	37,400	37,400
No. 319 and variations	3,260	6,880	6,880	3,260	61,900	61,900
F-132 alloy and variations	714	352	352	714	3,170	3,170
Al-Zn alloys	477	178	178	477	1,600	1,600
Al-Si alloys (0.6% to 2.0% Cu)	150	233	233	150	2,100	2,100
Al-Cu alloys (1.5% Si, max.)	148	72	72	148	646	646
Other ⁴	10,200	4,990	6,140	9,070	52,500	46,800
Wrought alloys, extrusion billets	22,500	62,300	62,900	21,900	565,000	564,000
Total all alloys	50,200	94,900	96,700	48,300	866,000	861,000
Less:						
Primary aluminum consumed	XX	18,200	XX	XX	163,000	XX
Primary silicon consumed	XX	1,930	XX	XX	18,400	XX
Other alloying ingredients consumed	XX	1,260	XX	XX	11,100	XX
Net metallic recovery from aluminum scrap and sweated pig consumed in production of secondary aluminum ingot ⁵	XX	73,400	XX	XX	673,000	XX

XX Not applicable.

¹Excludes integrated aluminum companies.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³May include revisions to previously published data.

⁴Includes alloys No. 12, Al-Mg, Al-Si-Cu-Ni, aluminum-base hardeners, variations of these alloys, plus other aluminum alloys.

⁵No allowance made for melt-loss of primary aluminum and alloying ingredients.

TABLE 6
AVERAGE PRICE OF ALUMINUM IN THE UNITED STATES
AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	Midwest U.S. market price	LME cash price Grade A
2015:		
September	79.989	72.053
October	76.227	69.112
November	75.155	66.469
December	76.905	67.762
January–December	88.244	75.426
2016:		
January	76.350	67.090
February	78.345	69.637
March	77.345	69.409
April	79.274	70.940
May	78.563	70.577
June	79.693	72.204
July	81.036	73.911
August	80.705	74.440
September	78.500	72.107
January–September	78.868	71.146

Source: Platts Metals Week.

TABLE 7
AVERAGE BUYING PRICES FOR ALUMINUM SCRAP

(Cents per pound)

Month	Used beverage cans	Mixed low copper clips	Old sheet	Old cast	Turnings (clean and dry)
2015:					
September	60.24	54.52	50.62	54.42	49.33
October	59.30	52.39	49.00	53.00	47.91
November	56.84	51.00	47.74	52.08	47.00
December	59.89	51.59	47.36	52.36	47.36
January–December	65.09	61.04	57.20	60.12	55.94
2016:					
January	60.63	54.00	49.74	54.32	49.74
February	61.60	54.85	50.90	55.00	51.10
March	59.87	56.00	52.91	55.91	52.91
April	60.71	57.00	53.14	56.48	53.57
May	59.90	58.00	55.14	57.93	56.79
June	60.36	58.50	55.86	58.00	56.39
July	61.30	58.10	55.65	57.65	55.65
August	61.52	57.00	55.00	57.00	55.07
September	60.02	57.00	53.33	56.33	55.33
January–September	60.66	56.72	53.52	56.51	54.06

Source: American Metal Market.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF ALUMINUM IN SEPTEMBER 2016¹

(Metric tons)

Country or territory	Metals and alloys, crude		Plates, sheets, bars, etc.		Scrap		Total	
	September	January– September	September	January– September	September	January– September	September	January– September
Argentina	24,300	129,000	--	--	--	15	24,300	129,000
Australia	--	4,870	27	183	--	893	27	5,940
Austria	7	20	2,470	24,200	124	1,470	2,600	25,700
Bahamas, The	--	--	--	--	167	1,200	167	1,200
Bahrain	8,110	84,600	4,110	39,400	--	--	12,200	124,000
Belgium	97	1,020	727	5,180	--	--	824	6,200
Brazil	--	18,400	790	10,900	544	15,300	1,330	44,700
Canada	171,000	1,690,000	20,600	193,000	29,400	272,000	221,000	2,150,000
Chile	--	--	(2)	(2)	242	2,980	242	2,980
China	243	1,430	29,100	274,000	9	495	29,400	276,000
Colombia	--	920	477	4,540	174	614	651	6,070
Costa Rica	--	--	--	1	229	2,200	229	2,200
El Salvador	--	--	31	185	62	1,610	93	1,800
France	491	7,650	1,260	12,500	49	1,150	1,800	21,300
Germany	1	1,190	5,390	51,000	44	580	5,430	52,800
Greece	--	--	2,100	14,900	--	20	2,100	14,900
Guatemala	--	--	--	--	640	7,000	640	7,000
Honduras	--	--	--	--	23	307	23	307
Hong Kong	--	--	205	2,790	--	--	205	2,790
India	4,640	19,600	2,080	21,500	--	56	6,720	41,200
Indonesia	--	--	4,620	29,900	--	--	4,620	29,900
Italy	--	563	543	8,110	--	162	543	8,840
Japan	(2)	4	1,940	21,700	26	464	1,960	22,200
Korea, Republic of	--	5,970	726	12,000	1,460	6,880	2,180	24,800
Malaysia	--	26,000	479	4,330	--	64	479	30,400
Mexico	1,040	8,600	3,180	32,800	11,000	93,700	15,300	135,000
New Zealand	69	8,130	1	1	--	(2)	70	8,130
Norway	105	7,120	16	50	--	--	121	7,170
Qatar	11,400	88,000	--	--	--	--	11,400	88,000
Romania	--	2	122	2,720	--	--	122	2,720
Russia	86,800	561,000	1,230	12,000	--	--	88,000	573,000
Saudi Arabia	3,370	41,700	--	--	--	142	3,370	41,900
South Africa	--	8,970	3,800	46,700	--	77	3,800	55,800
Sweden	--	16	621	5,070	--	--	621	5,090
Switzerland	--	19	201	1,050	--	40	201	1,110
Taiwan	3	135	534	4,920	397	3,040	934	8,100
United Arab Emirates	34,700	395,000	--	--	37	1,210	34,700	396,000
United Kingdom	39	610	646	8,330	385	3,320	1,070	12,300
Venezuela	2,690	32,400	--	466	296	8,440	2,990	41,300
Other	349	4,890	4,060	39,300	3,070	25,200	7,480	69,400
Total	349,000	3,140,000	92,100	884,000	48,400	451,000	489,000	4,480,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 9
U.S. EXPORTS OF ALUMINUM IN SEPTEMBER 2016¹

(Metric tons)

Country or territory	Metals and alloys, crude		Plates, sheets, bars, etc.		Scrap		Total	
	September	January– September	September	January– September	September	January– September	September	January– September
Australia	21	199	172	1,450	2	4	195	1,650
Belgium	(2)	33	141	1,100	119	2,400	260	3,530
Brazil	17	73	560	4,380	--	54	577	4,510
Canada	7,830	69,800	36,600	335,000	8,270	83,100	52,700	488,000
Chile	--	5	5	188	20	80	25	273
China	40	379	3,520	26,800	57,600	516,000	61,200	543,000
Colombia	1	7	93	1,580	40	232	134	1,820
France	373	4,200	1,670	8,120	296	1,720	2,340	14,000
Germany	82	1,090	1,200	6,560	491	3,510	1,780	11,200
Guatemala	--	16	2,050	15,200	--	32	2,050	15,300
Hong Kong	--	44	133	1,390	4,610	33,300	4,750	34,800
India	4	80	73	1,020	5,080	45,900	5,160	46,900
Indonesia	--	5	64	525	2,570	18,300	2,640	18,800
Ireland	3	20	45	568	--	--	48	588
Israel	6	34	759	6,640	--	--	765	6,670
Italy	73	114	166	1,730	--	23	239	1,870
Japan	182	1,280	1,990	20,600	1,320	13,700	3,490	35,600
Jordan	--	(2)	--	1,060	--	--	--	1,060
Korea, Republic of	(2)	503	2,530	24,900	12,600	102,000	15,200	128,000
Kuwait	--	--	48	3,630	--	--	48	3,630
Malaysia	15	38	441	2,850	5,100	37,300	5,560	40,100
Mexico	13,500	119,000	38,600	334,000	12,000	98,600	64,100	551,000
Netherlands	1,100	1,130	32	2,490	--	134	1,130	3,750
New Zealand	(2)	1	57	700	--	6	57	707
Norway	--	32	2	57	--	--	2	89
Pakistan	--	--	(2)	16	1,970	10,300	1,970	10,300
Panama	8	8	316	4,420	--	4	324	4,440
Romania	2	30	12	252	--	--	14	282
Saudi Arabia	2	21	746	5,480	--	--	748	5,500
Singapore	8	97	103	1,890	--	--	111	1,990
Spain	--	5	149	1,870	55	137	204	2,010
Taiwan	234	2,310	318	3,760	2,210	25,100	2,760	31,100
Thailand	--	40	426	4,450	432	2,690	858	7,170
Tunisia	--	--	466	1,340	--	--	466	1,340
Turkey	--	3	225	2,540	--	67	225	2,610
United Arab Emirates	(2)	5	743	5,730	98	596	841	6,330
United Kingdom	30	393	1,120	11,200	112	1,120	1,260	12,700
Vietnam	13	174	21,500	83,800	78	4,490	21,600	88,500
Other	57	1,330	1,100	9,750	614	6,980	1,770	18,100
Total	23,600	202,000	118,000	940,000	116,000	1,010,000	258,000	2,150,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.